



CHOLERA : A PRACTICAL STUDY AS WELL AS A PERSONAL EXPERIENCE.

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CHOLERA; A PRACTICAL STUDY AS WELL AS A PERSONAL EXPERIENCE.

THOUGH I have nothing that is either very new or very startling to say about this much discussed disease, yet have I seen much of and heard more about it in my time, and a well-known writer¹ has truly said that "There is always something to be learned from everyone if you touch them on the points they know." Influenced by this consideration, as well as by the fact that though this scourge has been talked about and commented on since the era of Aretæus and Hippocrates,² downwards to these our own days, yet that its cause and mode of propagation are almost as much *sub-judice* now as they were then, while the resources of civilization are confessedly powerless against its ravages, there is, I think, room for one more short dissertation of a *practical* character on the point. This must necessarily resolve itself, as far as I am concerned, into a review of my own personal recollections of the outbreaks of it I have seen or heard of locally, and of such general deductions from these as the situation itself may warrant or suggest.

Any or such attempt as would aim at exhausting the etiological relations of this complaint within the limits at my command, would clearly defeat its own object. Every conceivable cause has been assigned at one time or another, according to locality, association, and temperature, for its origination and diffusion. Contagion, infection, impure water, tainted air, over-crowding or defective ventilation, lowness of site and inadequacy of provender,³ dampness, drought, dirt, and the dispersion of infected sewage through the atmosphere. The effluvia from decomposing

¹ The Greville Memoirs, vol. 1, p. 234.

² The writer of the article Cholera, in James' Medical Dictionary, Lond., 1745, says that "among the ancients, Caelius Aurelianus, and Aretæus have given the most distinct account of this disease."

³ All these and many others are given as causes of cholera in the ordinary text-books, and describing the epidemic that devastated the camp of the Marquis of Hastings, in Bundelkund, in November, 1817, Mr. Prinsep says (History of the Political and Military Transactions . . . of the Marquis of Hastings, vol. 2, p. 108,) that "the year was one of scarcity, and grain had been collected with extreme difficulty. That part . . . on which the division was encamped

animal or vegetable substances, including cesspools, grave yards, etc., have been added to this number, so also have the emanations from human and animal excrement, for

. human pride
Is skilful to invent most serious names
To hide its ignorance.

And this same inventive appetite faintly keeps pace, *en mangeant*, like other kindred faculties, with the mystery and conjecture it feeds upon. Nor is this list yet complete; our old friend the animal or vegetable virus¹ of the period has yet to be provided for, and if we may judge by the controversies or commissions that have been lavished upon the point, the fashionable bacillus of the day has not yet quite succeeded in ousting him. This latter has only lodged a process of ejection *in forma pauperis* against the former, and asked for another commission of inquiry; and if things go on much longer as at present, humble folk like myself will begin to question the existence of a disease that can claim such an embarrassing diversity of causes or progenitors for its parentage.

But this is not the phase of the question or the feature of the case with which we are here most concerned, and having no theory to uphold or object to advance through this little essay, I had, I think, better descend at once from the realms of criticism and conjecture to those of experience and fact. I will therefore relate a few typical cases by way of preface to what I have to say later on, and such

was, moreover, low and notoriously unhealthy," and enumerating the meteorological incidents of the year 1860, Dr. Murray says (Indian Annals of Medical Science, No. xiv., p. 420,) that "there was scarcely any rain during the cold weather, which caused a scanty crop of the ordinary food of the people." See also, in the same direction, Macpherson's "Cholera in its Home," p. 7.

¹ Sir H. Holland "arrived at the conviction" (Recollections of Past Life, p. 325,) that "its phenomena cannot otherwise be explained than by looking to organic life, animal or vegetable, as the source—the actual *virus*, which, *reproducing itself* gives origin, diffusion, and direction to the disease under the different conditions it assumes;" and Mr. Bidie of the Madras Army ascribes its "propagation (Annals as above, No. xiii., p. 24,) from case to case to some subtle influence *emanating from a focus of the disease*." Koch on the other hand ascribes it to a bacillus, and so the battle rages between three entities, whose very existence is still *sub-judice*. *Sic itur ad astra* as well as to baksheesh, baronetries, and knighthoods, and the "battle of Dorking" is a mere bagatelle alongside of its big brother the battle of the "virus," the "focus," and the "bacillus."

comment as these may suggest, or as the context may supply, will appropriately complete the chain of this simple story.

My first case occurred at Cawnpore, and was a sporadic one. The subject of it was a broken-down man of intemperate habits, who had passed several years in India. The attack did not, however, appear to be a very serious one, and I had only just carried out some preliminary measures, such as a mustard emetic, a warm bath, friction, etc., when the surgeon of the regiment came in and relieved me—it being mess-time—from further attendance on it. I returned to the hospital soon after dinner, and finding that there was no material change in it one way or the other—while my senior expressed a wish to go on with it—I withdrew for the time, and when I saw this patient again, about 2-30 or 3 a.m., he was clearly dying. Returning together to our respective bungalows, I availed myself of the opportunity of interrogating my experienced *confrère* as to his estimate of the value of drugs in the treatment of this disease, and the following dialogue then took place:

“You have, I suppose, F——, seen a good deal of cholera during your service in this country.”

“Yes,” he laconically replied, “a good deal.”

“A good deal,” I muttered. “May I ask, Have you derived much benefit from ‘treatment’ in it at any time?”

“Not much,” he answered.

Wishing to push my interrogatory home, I asked if he had derived any benefit at all from treatment—meaning thereby drug-treatment—in this disease, and he answered after a pause, that, so far as he could then remember, he could ascribe none of the “recoveries” he had witnessed in this complaint to the use of remedies. I then told him a story I had heard of in connection with an interchange of views that took place on one memorable occasion, between a well-known London grinder and one of his pupils, a pretentious coxcombical youth, which turned on the treatment of croup or whooping-cough in children, and wound up somewhat as follows:

Grinder Loquitur: “Don’t you think that an emetic or a dose of castor-oil might benefit your patient?”

Youthful Aspirant answers: “Of course; of course.”

G. L.: “Well, sir; well.”

There being no response to this hint or intimation, the

Grinder resumed the examination with a "don't you think that a mustard poultice to the chest, or hot flannels to the throat would benefit the child?" and finding that all his hints or suggestions only elicited the same monotonous answers, he asked his pupil, with, perhaps, needless warmth, if he did not think that a brickbat to his b—de would cure his patient. The roar that followed this sally prevented the answer, if any, from being heard, and my friend emphatically assured me that such was, *au fond*, his own experience and convictions.¹ A score, at least, of equally experienced officers have borne similar testimony in my hearing as to the inefficacy of medicine in typical, fully developed cases of this complaint, and though I have since seen a hundred cases at least of this description, I can freely say that in no one of these have medicinal remedies—whether these were administered by myself or prescribed by others—been, so far as I could judge at the time, or so far as I can now remember, of any *enduring* benefit or relief to the recipient of them.

My second case occurred at Futtehghurh, and was also a sporadic one. I have a good right to remember it, for its occurrence at the time cost me in cash alone £ 100, and deprived me of what I valued more in those days, the splendid field for operative surgery, which it and its greater neighbour, the populous city of Furuckabad, so lavishly afforded. I had just taken over the civil duties of this station in addition to my own, under the usual sanction and on an understanding to that effect with its ordinary incumbent, when this case came in, and do what I would—and I stood or sat by it to the end—the result was the same—death. The officer commanding, a timid nervous man, thinking that the detachment would have to go into camp under canvas, telegraphed for extra aid, and another (Indian)

¹ This gentleman—who has "retired" since this paper was written, full of years and honours, from the service—possessed at this time only one qualification, and this was the humblest and the cheapest that is known to our law. He had'nt a single medical classic in his library; neither did he take in any of the professional journals, and yet, was he, "take him all in all," one of the shrewdest and best all-round practitioners, civil or military, I have ever met. I have met others like him who never open a medical work, and who are, I think, no whit the worse for this their abstinence or nonchalance. I distrust somehow men who have long handles to their names. Their "too much learning" knocks, as I believe, all the practicality out of them.

officer was sent down post-haste, and at a great inconvenience to himself and others to "relieve," or rather supersede me. He and I lived together subsequently, and often dwelt on the fatuity, if not the utter bootlessness of the step that had been taken, but there was no help for it, my poor patient was in his grave, and I—well, *ce qui arrive c'est l'imprévu*.

My third case occurred at Noushera, and was one of the very few, not more, I think, than five in all that occurred at the time here referred to, at this station. All I now remember of it amounts to this—and I may be here allowed to observe that I merely introduce these cases for the purpose of enabling me to say my little say through them on the subject generally—that the subject of it was quite a young lad who had only recently joined his regiment, and that his ordinary symptoms were complicated with some evidence of irritation of the brain. Finding that he could not swallow his support in the recumbent posture, I put my arm under his head, and was just lifting up this for the purpose of giving him some iced champagne, or beef-tea, when he "gulped" convulsively in the throat and expired. On section, a few hours afterwards, the bladder was found to be contracted and empty; the stomach contained a large quantity of a yellow pultaceous fluid, and the small intestines were congested; the mucous membrane of the large bowel had a soft sodden feel, and an ashy greyish appearance, and the tube itself contained some characteristic rice-water fæces and fluid. This fluid only showed some amorphous granular matter, a few oil globules and flakes of scaly epithelium under the microscope, and this was, in brief, the sum and substance of the *post-mortems* of these kinds of cases I have made myself, or seen made by others in my time, in the east.

So far for cases, let us now look at the disease as a whole, and find out, if we can, whence it comes and whither it goes. Its intermediate behaviour and action ought also to engage some of our attention. A description of its recent progress in Spain that appeared in the *Standard* of the 30th of June, 1886, will help us somewhat in this quest. According to this, "the second week since the official declaration of the existence of cholera ended at midnight yesterday. In that period of seven days, 7,849 cases and 3,699 deaths have occurred in eight provinces.

The epidemic is declining in the province of Murcia, increasing in the provinces of Saragossa and Alicante, and causing great havoc at Arangues, where there were 143 cases and thirty-three deaths between midnight on Sunday and midnight on Monday, including many soldiers of the garrison. In Toledo the epidemic is serious. Great sanitary precautions are taken at Madrid." I exclaimed to myself as soon as I had read this, "Just the same as in India." It is first heard of, let us say, at Hyderabad or Travancore, next at Madras or Vizianagram, and next, *sed longo intervallo*, at Calcutta, Dum-Dum, or it may be, even at Cawnpore and Agra, whence after a reasonable interval—for it takes its time, and is in no particular hurry¹—it migrates to Delhi and Umballa. We next hear of it at Mean-Meer and Lahore, whence it proceeds, *hand passibus æquis, viâ* Jhelum, etc., etc., to Raurel Pindie and—again at a leisurely pace—to Attock and Peshaur. Having taken breath here, it starts again with renewed vigour on its destructive course, "over the hills and far away," towards Cabul and the Parapomismus, without so much as a "by your leave," and in the very teeth of stringent police regulations, rigid cordons sanitaires, sulphur fumigations, and other great sanitary precautions of that kind. It defies the one and ignores the other, and my own belief is that once it is on foot in a district or a country, you may as well be whistling a jig to a milestone as try to stop its progress by any of these expedients.

But it does not always advance in this leisurely way; it sometimes rushes in like an avalanche, and remains or goes away just as seems best to its own sweet self. More frequently, however, it is ushered in with fire and sword in the shape of a drenching rain, terrific thunder and lightning, and other boisterous aerial phenomena of that kind, and some of the worst or best known epidemics of recent years have been introduced in this way. Thus, alluding to an outbreak of this disease that appeared in the 31st Regiment at Umballa, in July, 1845, and which carried off

¹ Dr. Murray gives the converse of this as its course in 1860 towards Agra and Central India; and describing another outbreak of it elsewhere, Dr. Balfour says (*Annals ut Supra*, No. ix., p. 105) that "the epidemic travelled principally to the westward by our grand lines of communication. The people, aware of this, did all in their power to pass it on; *but no! it would only travel at its own pace*, and that in our direction." How very accommodating!

187 out of 339 seizures in that station itself, and from the Sirhind Division alone 365 Europeans, Mr. Macnamara says¹ (on the authority of an eye-witness) that "during one very stormy night, and after a heavy downpour of rain, there were forty or fifty cases of cholera." He asserts elsewhere, p. 293, that "no widespread epidemic has ever occurred in India unless during or immediately after rain, "and this is, I believe, a truth or a fact that admits of no material qualification or denial." 'Twas on it, I think, that the late Dr. Bryden based his views as to the connection between the spread of this disease and the course of the monsoons of India; but the absence of similar currents in other countries that have been visited, though not perhaps so regularly, by this scourge, must tell against this otherwise plausible theory, and 'tis, I believe, now generally abandoned.

The night of August 2nd, 1867, at Nundkote (near Murree) was one of the most stormy and boisterous that I have ever witnessed. Rain poured down in torrents, saturating the tents and huts, and flooding the encampment in all directions. The frequent flashes of lightning (*intonuere poli et crebris micat ignibus æther*) that wriggled for a moment in the troubled sky, served but to make the darkness more visible, and the thunder reverberating through the neighbouring hills formed an unearthly combination of sound and fury such as I have no wish to witness again. Frequently called up to minister to my charge, I had ample opportunity of becoming acquainted with the elemental strife that raged so furiously above me. For all the shelter I derived from the wretched shanty in which I was "housed," I might as well have waited without to watch this battle, for it leaked at every point and crevice; but I had to be within hail of my patients, and the few essential drugs or comforts available were stored away under my cot. I stayed there accordingly, and finding by the following morning that some evil influence had been at work amongst us during the night, I made this entry about it in my official diary:—"It is curious to note, but difficult to account for or explain, the agency by which five different members of our small encampment are attacked on the

¹ A Treatise on Cholera, pp. 98-9. Quarter-master Briggs, R.A., assured me that he saw thirty-seven deaths in one day in 1864 among the European troops of this station.

same night by the same disease." Of these five "attacks," three were women and two were children, and three of the "lot" died before the sun of that day had set.

"A severe thunderstorm burst over the encampments of the pilgrims—about three millions in number—at Hurdwar on the night of the 11th of April, 1867, and cholera made its appearance in an epidemic form amongst them the following day."¹ I believe that the frightful outbreaks by which three thousand persons were carried away in less than five days at Kurrachee² in 1846, as well as that lesser one at Mean-Meer in 1861, which contented itself with 534 European souls,³ were both ushered in by similarly sudden and violent atmospheric changes, and somewhat similar phenomena would appear to have occurred nearer home than either of these places. Being prevented by illness from attending to such matters at the time, I am now unable to say if any such aerial manifestations as these preceded the outbreaks of cholera that prevailed at Marseilles and in Naples a year or two ago; but there have been extensive and destructive telluric disturbances in Italy and Spain, and describing a very fatal seizure that took place at Albano in 1867, a writer in *Blackwood's Magazine* for the October of that year, says that "the air grew dark, a wild wind rose and chilled the thinly-clad inhabitants to the bone; it came upon them without warning, like a sudden doom, and drove the village folk indoor

¹ Private letter from a medical man who was present.

² "The deaths in the country around being added, not less," says Sir W. Napier ("History of the Conquest of Seinde," p. 293) "than sixty thousand persons perished during the few days (from the 14th to the 18th of June, 1846) the horrible pestilence lasted." Trotter adds ("The History of the British Empire in India," vol. i., p. 94) that "the native troops fared but little better" than their European brothers, and it may be here incidentally noted that "in 1819 the whole surface of Kutch was changed" by an earthquake. This province has ever been an unhealthy one, and a local paper—*The Sindian*—quoting from an official return of 1861, says that "in the Shikarpore district, from March to July last, 9,607 men, women, and children, were attacked with cholera, of whom 5,318 died."

³ This epidemic lasted from the 6th of August to the 8th of September, 1861, and "strange to say," says *The Mofussilite*, "the native troops quartered close by are perfectly free from it." "The whole question," says Macpherson, *op. cit.*, p. 27, "why cholera attacks a town, or a fleet, or a barrack, or a jail, and then dies out, . . . is still wrapped in mystery." 'Tis, indeed, and likely to remain so, sanitary confabulations or commissions notwithstanding.

to hug their winter cloaks to them, and seek winter clothing. That day there were," says this writer, "seventy deaths from cholera in Albano, and all the wild incidents of a plague-stricken city were brought into immediate life in the little town which but a day or two before had been so pleasant and cheerful."¹

As a contrast to this, and in order to show the different conditions under which this pest sometimes makes its bow, I quote the following graphic description of one of its appearances at Peshawur. This description was written by a medical man, who assured me afterwards that there was nothing at all in the general surroundings of the station, or of its then atmosphere, to account for or explain this sudden onset, and runs as follows:—"On Monday morning, the 20th inst. (1875 ?), all was well, and yet before nightfall, as if the angel of death had blasted with evil our fair valley, no less than eight Europeans had been stricken down dead with cholera. Like an avalanche, it came down upon us. Six men of the 42nd Royal Highlanders, two men of the Royal Artillery, and three or four native soldiers, had fallen victims to it in a few hours. The blow was sudden and fierce, and it smote us all with sadness and sorrow. The stoutest heart quails at the approach of an invisible enemy, which seizes his prey, and lays him prostrate so suddenly and so vehemently;" and readers of "Hecker's Epidemics of the Middle Ages"—to go no farther—need scarcely be reminded that this too was the manner in which several of his "pets" presented

¹ Describing a somewhat similar occurrence in another quarter of the globe, Mungo Park says ("Travels," etc., p. 304) that "on the 10th several very heavy tornadoes occurred, and the ground was covered with water three inches deep. This tempest had an instant effect on the health of the soldiers, and proved to be *the beginning of sorrow* for us. On the following day twelve of these were ill with a dysenteric affection," and how many similar outbreaks elsewhere escape notice, *Carent quia vate sacro*—it would be hard to say. All our accounts from Spain testify to the influence of phenomena of this kind on the enhancement of the virulence and mortality of this disorder. Thus the Madrid Correspondent of the *Standard*, writing under date July 27th, 1885, says that "several provinces show an increase *since the storms*, and the epidemic is spreading in the north of Spain;" and another correspondent adds (*St. James' Gazette*, of October 14th, 1885) that "two hours after a thunderstorm (near Seville) had ceased, upwards of three thousand persons were attacked with diarrhœa and vomiting, and all the other symptoms of cholera."

themselves. "Stinking mists and foreign elements in the atmosphere" are among the lesser of the lights and shades of his picture of this period, but then the chroniclers of these times were credulous and unskilled in the art of weighing evidence, and we may accordingly regard many of their statements as exaggerations or worse. All that it concerns us here to know is that this disease often—shall we say always?—gives fair warning of its approach, and that as a general, if not an invariable rule, "No widespread epidemic of it has ever occurred in India—or shall we again say, elsewhere?—unless during or immediately after rain."¹

I allude also to these phenomena because I have repeatedly heard them associated with episodes of this kind on the spot. Two illustrations in point must suffice for our present requirements, and I quite "think it probable (that) a certain state of the atmosphere only requires the circumstances of a large gathering of people to supply an exciting cause for (an outbreak) of Cholera during the rain in India."² "On a certain day in the month of June, '65," says a friend, "when in command of a battery of Field Artillery that had been quartered at Baroda for six months previously, my wife drew my attention one evening, about the usual hour of outdoor exercise, to a hazy, reddish coloured state of the atmosphere, that approached us from the west. It resembled, as she thought, the condition of the same element that ushered in the terrible epidemic at Kurrachee, in 1846, and which polished off some seven thousand persons or so within, I think, a week. She was very despondent all that evening. . . . On being awoken by my 'bearer' about 5 a.m. the following morning, with a message to the effect that the Doctor sahib wanted to see me, my wife exclaimed at once that 'assuredly cholera must have occurred amongst the men,' and such was truly the case. Five of them had been seized almost simultaneously in the lines and hospital; three of these died the same day, and we had altogether twenty-nine deaths out of fifty-six seizures."

The officer to whom I am indebted for this table—the only one of its kind I have preserved—gave me the following account of the outbreak referred to therein: "We were engaged

¹ Macnamara, *op. cit.*, p. 223.

² "Facts about Cholera," in *Lancet*, for July 11th, 1885.

to dine out, and being usually an early bird, I had donned my war paint, and was strolling about in our 'compound,' waiting for my wife. Thinking that she was needlessly particular and dilatory with her toilet, I went in to stir her up a bit, and found her gazing wistfully towards the horizon through our bedroom window. I rallied her on the delays but she only pointed to the sky, and said that 'it assuredly, portended some mischief.' And indeed," he adds, "it was 'a caution.' You could almost catch the murky rain-charged clouds, which threatened to break at every moment, and swamp us all, but they held off, and . . . I had to go alone to the dinner that evening. Cholera broke out that very night in the battery to which I then belonged, and this table condenses the result of this outbreak."

Date from May 6th to 19th, 187—, inclusive.

Details.	Strength.	Number attacked.	Number recovered.	Number of deaths.	Ratio per 1000 of attacked.	Ratio per 1000 of deaths.
Officers	5	1	...	1	200.00	200.00
Men	129	17	8	9	62.01	69.76
Women	10
Children.....	17	2	1	1	58.82	58.82
Totals.....	161	20	9	11	124.22	68.32

REMARKS.

There were other cases among the European infantry at this time in this station, and the escape of the women is, to say the least, curious. I have an impression that they are proportionately less liable to this disease than are their relatives or husbands, and they certainly shake it off better. The subcutaneous injection of chloral, as advocated by the late Mr. Hall, relieved spasm in several cases, but failed otherwise in all.

As regards the mortality of this disease, and the rapidity with which it slays its victims, it is, without question, the most marked in these respects of all the maladies of modern times.¹ Hecker estimates the loss sustained during the first visitation of the black death, by fifteen European cities and

¹ I see by the papers that the deaths from this pestilence rose to 450 a day (in this city), while the victims credited to it reached 15,000 in one autumn in 1849.

the Franciscan and Minorite Orders, at a trifle under 700,000 souls, and I have an impression that, were we to throw in Hurdwar and Puri, any fifteen Indian cities of equal dimensions would show an equal, or even a greater fatality than this. Anyhow, as many as 20,000 souls have been known to go out at or after one memorable gathering at this janua coeli of Hindooism, and it was stated a few years ago in an Indian periodical that "62,571 persons perished in the Noakolly and Chittagong districts in Bengal from the 31st of October to the 31st of March, of the year 187—."

It may even be doubted if King Cholera has not killed, in any one of his great campaigns, as many men and desolated more homes than all the conquerors that have appeared on the page of history from the days of Alexander down to those of Napoleon; and one thing is certain—aye, as certain as death and taxes—that given a certain state of the atmosphere, as well as of the season and temperature of India, you can any day manufacture cholera to order by establishing a "pūja" or a "mēla,"—a prayer meeting or a fair—or otherwise calling large crowds of dirty, fanatical Hindus or Mahomedans together. The religious element would, indeed, appear to impart a special stimulus to the development of this and other rapidly fatal diseases everywhere. We know, for instance, for a certainty that "scarcely one in a hundred of the pilgrims who went to the Jubilee at Rome in 1350 escaped with his or her life;"¹ and describing that valley of death, Puri, Dr. Hunter² expressly says that "the loss from this homicidal enterprise alone—the pilgrimage to the shrine of Jugganath (the lord of the world)—is sixteen times greater than that which was sustained by our armies at Plassey and Waterloo put together."³

¹ Hecker, p. 29. ² Rural Bengal or Orissa—I forget which just now.

³ The announcement that some 100,000 souls perished within a few months of the present year in Upper India, recalls to me a conversation I had some years since at Agra with General Wheeler, who then commanded the Meerut division. He stoutly maintained that the (so-called) sanitary changes or improvements that had been introduced into India in his day, had in nowise controlled the progress, or diminished the mortality from this disease. I held the contrary view, and quoted to that effect Parkes, the Blue Books, etc. While we were thus arguing the matter, the late Lord Sandhurst—then Sir W. Mansfield—who had been detained in an adjoining office on some financial details,

Let us now look at it nearer home, and see how it demeans itself in this respect—*chez nous-mêmes*. My own first acquaintance with it on the spot was not encouraging. It occurred in this wise, and the greater susceptibility of new arrivals in India is as striking as it is inexplicable. A frolicsome young fellow—whom we may call for the nonce, Snooks—who had succeeded in over-running the constable in a cavalry regiment at home, thought he might retrieve his battered estate by exchanging into what he called a “grabbee” corps abroad. He did so accordingly, getting £500 for the step (rather below its true market value, as I understood), and he embarked with myself and others on board the P. & O. steamer, *Bengal*, at Suez in April, 1861. He soon attracted the notice of his fellow passengers by his lively manners and inexhaustible hilarity and facetiousness. He initiated every movement that was made for fun or mischief, and was, as a Yankee might say, “the most amusing cuss by a long chalk” on board of us.

He was, in short, the life and soul of the whole party, and even the missionaries—those grim harbingers of the angelic message, *pax hominibus bonae voluntatis*—who left us at Galle or Madras, took leave of him with a smile or a sigh, according to the impression he had made upon each of them. When we arrived at Garden Reach there was no end of hand-shaking and adieus, and all those who resided in or near Calcutta promised to look him up in due course at his quarters in Fort William. I went with some others to the Hall of All Nations, and was asked at breakfast a morning or two afterwards if I had heard the news. “What news?” I asked. “Why, about Snooks,” replied my friend. “What about him?” I said. “Has he got into more hot water?” “No,” says my interlocutor, “he’s cold and stiff enough by this, poor fellow; he’s dead, died of cholera early this morning. He’ll be buried to-night. Will you attend the funeral?” I replied in the negative, and there was an end of the matter. We heard no more of Mr. Snooks or of his belongings.

joined us, and listened eagerly to the arguments that were advanced on either side. He took no part in these, but I could clearly see that he sided with my opponent rather than with me; and so did also—as I subsequently learnt—that equally experienced officer, the late General Colin Troup, C.B. Several senior apothecaries have assured me that they too are of this opinion, and I believe myself that this fell disease is now just as fatal and just as uncontrollable everywhere as ever it has been.

The late Surgeon-Major Stuart has more than once mentioned the following circumstance in my hearing:—Two non-commissioned officers of a battery of artillery, of which he was at the time in charge, came early one night to the local hospital to see a friend or comrade who was suffering from this complaint. He allowed them to see and shake hands for only a moment with him, after which, seeing doubtless that he was “done for,” they returned in a very despondent mood to their lines. Whether the effect produced on them by the sight of this dying comrade specially disposed them for an attack of this disease, or that they had previously imbibed the seeds of it elsewhere, I am now unable to say. All I know is that they had scarcely arrived in their quarters than they were both simultaneously seized with symptoms of cholera. They were, of course, presently brought back to the hospital, where they died a few hours after him whom they had just visited, in fair, if not in robust health. The same commissariat-cart that conveyed the remains of the one to their resting-place, carried those of the others also to the same cemetery the same (following) afternoon.

I am indebted for the following narrative to the late Dr. Best. (I have had similar accounts of the occurrence from others myself):—A man of the 6th Foot was digging a grave for a deceased comrade on the side of the little hill called Topah, near Murree, on the other slope of which his company was encamped at this time. The ground being hard and stoney required considerable efforts for its excavation, and he was, I believe, rather fatigued. While working away at this task, he had to give in—to use the words of a fellow-worker—through illness, and he was taken to hospital in the usual way. He died there within a few hours—four I believe—and he was buried in the same grave he had just helped to prepare for his *confrère*. He thus enjoyed the unique privilege of assisting at the excavation of his own grave, and a finer view than this same grave commands on all sides scarcely exists elsewhere in this world.¹

¹ Dr. Munro saw one of the majors of his regiment half an hour after a seizure, when I found him, he says, in a state of collapse. “He (the major) had no nausea, no vomiting from first to last, and only one copious discharge. He never rallied from this state of collapse, had terrific cramps, became quite blue, and died, sensible to the last.”—Departmental Blue Book for 1862, p. 416.

I have myself read, in the evening, the burial service of their and my church over the remains of a stout sergeant and his wife, who appeared in their usual health on rising that same morning. The husband had to be treated, "Ach Gott," as Carlyle would say, for such treatment—it was the brick-bat over again—in his tent, while his wife was removed to our hospital tent, some two or three thousand yards away, and hers was, undoubtedly, the worse case of its kind I have yet seen. The route of the dhooly in which she was brought in could be easily made out, from the discoloured traces of slime and blood it left behind it. A thick, tarry, blackish fluid escaped from her body at every shake or movement of the same, "upwards and downwards, sir," as one of her friends assured me; and this continued in spite of all our efforts, up to the moment of her dissolution. It also continued to escape, though of course to a lesser extent, after her death, and it would, indeed, seem as if all the contents of her interior had undergone a process of solution, so copious was this fluid. Where it all came from I could not even guess.

The following occurrence took place at Morar, one of the worst stations in the east :—A young officer of the name of, let us say, Guppy, was anxious to visit the hills soon after his second arrival in India. He asked for, and obtained, leave accordingly in the usual way. All the necessary preparations had been previously made; his dhâk-gharry was at the door, and the luggage and bedding had been disposed of in their proper places. Remembering shortly after mess—at which he partook freely of fruit—that his servants remained unpaid, he returned to his bungalow, some two miles off, where he was seized with cholera, and whence he was only removed to his grave. The attack was a very severe one, and he gave himself up for lost *ab initio*. It lasted, however, from 11 p.m. to 7 a.m. the following morning; and now comes the catastrophe. The colonel of the corps, who had meanwhile heard nothing of the case, was transacting the same morning the ordinary orderly-room duties of his office, when his attention was attracted by some mysterious whispering, or other indication of mischief, in his neighbourhood. He asked one of his staff what the matter was, and was somewhat abruptly told that Guppy was dead; "died of cholera just now, sir," was the startling reply.

"Struck all of a heap," as one of my informants described the change that took place in him, he turned as pale as a sheet, and nearly fainted on the spot. He continued, however, to sign the necessary papers, and then mounting his horse or buggy with difficulty, he rode or drove direct to the doctor's bungalow. He never left this alive, for symptoms of an aggravated character, which led to a profound collapse, and needed not the aid of cramp, diarrhœa, or vomiting to complete their work, soon set in; and another (a third) officer had a like seizure, and died of the same complaint about this very time. All three were buried, if not on the same afternoon, certainly within a very few hours of each other, in the same cemetery; and every reader of Mr. Macnamara's book will recall in this connection that classic christening at Umballa, at which twelve persons were present, including the man and his wife. All of these, except the baby, were in their graves by the following evening; and I am gravely asked to believe that a microscopic something—for its very identity is still *sub judice*—no bigger than "the smallest particle of the impassive atmosphere" is the cause of all this. You may as well ask me to believe that sunbeams can be extracted from cucumbers, or that—like the celebrated Lagado professor—one may cure any disease "by contrary operations from the same instrument."

As regards the question of treatment, it will be readily inferred from my opening observations that I attach little or no value to the use of drugs *per se* in this disorder, in its aggravated or algide stages.¹ That is so, and yet must there be, of course, treatment of some kind or other. The sooner this is enforced, the better; there is no time to lose. Soldiers and sailors are entitled to it by virtue of their engagements, and the medical attendant who withheld it

¹ Carbonate of ammonia was the drug that was relied on in the last epidemic of this disease in Peshaur, at which I assisted, but I derived no benefit from its use in the cases that came under my own care; and I find that the latest advocate of drugs in cholera—whose contribution to the question I have read—admits that his treatment of certain forms of it was "very unsatisfactory, all efforts to promote secretion from the bowels being usually fruitless." Dr. Murray, though himself a bit of a discoverer in this field, also acknowledges—what I contend for—that "after collapse supervened, no remedy appeared to have any direct influence; and, *in some cases, it was questionable whether the remedies assisted nature in the disease.*" There is really no question about it,

from them, on any pretext, would soon find his level. So would the civil practitioner, general or otherwise, who folded his arms in the presence of this disease, or intimated to the afflicted sufferers that he had no faith in physic in cholera. He would soon get his *congé*.

What I deprecate, and what I think most experienced observers will deprecate in the management of cases of this kind, is that *nimia medici diligentia*, which persists in thrusting routine drugs down the throat of a poor helpless sufferer, who has no power of selection or resistance in himself, and whose capacity for absorption is either in abeyance for the time being, or is totally extinguished. I would reserve, instead, what remains of this for the utilization of such substances as iced milk, champagne, beef-tea, etc., etc., as may best resist waste ; or revive, for however short a time, the waning powers of life, and in no case, or under no pressure, would I withhold from the patient any of those drinks—not positively poisonous—his own feelings or cravings would point out or suggest.

Sir Charles Napier it was, I think, who insisted on this latter point in all his communications on the subject with the medical officers of his command ; and I have often thought as I contemplated many of these cases, that they stood more in need of a nurse than a doctor. The body of the sufferer should be so placed as to cause no strain or inconvenience to its owner. It should be kept as warm as possible with heated pans, bottles, etc. ; but I never derived any benefit from mustard poultices, or other irritating applications of that kind ; and as to the discharges, they should be taken direct from the person, or removed as soon as possible afterwards. The body should, in short, be disturbed as little as possible ; and when medicines are given,

they did not, and the late Mr. Pritchard has well summed up the opinions of the more experienced or observant of his countrymen on the point, in his amusing "Chronicles of Dustypore," pp. 315-16, whereat he allows that "English doctors and native doctors were of much the same avail (in their treatment of this complaint at this station) for King Cholera has as yet defied science to read his deadly mystery, and learn the secret of his rule. All that science can do is to narrow the limits of his ravages ;" and as he is now dead, while I am unable to recall one single solitary instance of this power or performance on the part of science or of sanitation either, I humbly await such enlightenment on the point as the reader of this paper may be pleased to offer.

they should be given in the most concentrated form practicable. I rarely went outside the common remedies, such as sulphuric acid, æther, tinct. opii, chalk mixture, and chlorodyne, and I found Murray's pills¹ useful whenever there was much noisy eructation or flatulence. Friction, that form of massage with which all Orientals are so familiar, often tends to mitigate, even though it fails to subdue, cramp, but the best remedy for this is chloroform; and as to those depressing or exhausting processes called intravenous transfusion, subcutaneous injection, rectal alimentation, etc., experience has shown that they produce no permanent good.

As to that barbarous measure, so beloved of the native practitioner—the actual cautery²—I have never seen it used,

¹ I bought for a penny yesterday (Nov. 16) at a stall a volume of Yorick's Sermons, which contained the following, "Recipe for Cholera":—

Rx Opii Pur 10 grains
Sulph. Cupri 5 grains
Hyd. Submuri 6 grains

℞ ft. pil 12 quam (sic) capiat unam post singulas sedes liquidas.—On the first symptom of attack take one pill, and after every liquid motion take one pill till the bowels are cleared. Dr. Turnbull's "Recipe for Cholera, September, 1834," and Yorick *preaching*, reminds me of Dr. Johnson's simile of "a dog dancing on its hind legs;" or better, perhaps, of the devil drinking holy water.

² "Wolff," says Dr. Cooper ("The Travels and Adventures of the Revd. Joseph Wolff, D.D., etc.," p. 449) "the natives have a remedy which has very frequently succeeded in stopping the cholera, and this is putting a hot iron upon the stomach; and he added, 'Will you submit to that?' Wolff said 'Yes!' He then branded Wolff three times upon his stomach, which (God be praised!) stopped the cholera, and Wolff began to sleep." And "the remedy upon which even Europeans relied, in the early days of our settlement at Bombay, was, according to Anderson ('The English in Western India,' pp. 132-3), of a painful and barbarous character. A hot iron was applied to the ball of the sufferer's foot; if he winced it was expected he would recover, but if he showed no signs of pain he was given over by his medical attendants." He quotes, in a note to the above, a Father Martin as writing in the *Lettres Edifiantes*, tome iv., to the effect that a "Signor Mancuchi had discovered another cure by which he gained vast reputation at the Mogul Court. His infallible remedy was this: Take an iron ring about an inch and a half in diameter, and thick in proportion. Then heating it red hot in the fire, extend the patient on his back and apply the ring to his navel, in such a manner that the navel may be as centre to the ring. As soon as the patient feels the heat—which must necessarily be in an instant (I should think so!)—take away the ring as quickly as possible, when so sudden a revolution will be wrought in his intestines that his pains immediately cease." Fryer observed ("Account of

and I am no advocate for a resort to measures in the case of outsiders which I would not inflict on friends or submit to myself. When this disease appears, however, in an epidemic form, in any city or cantonment, the best, or, in short, only effectual remedies are isolation¹ and flight. Defoe emphatically says, in his "History of the Plague," p. 175, that "the best physic against the plague is to run away from it," and I have sometimes thought that this would also, were it always practicable, which, of course, it is not, be the best physic against cholera. But the former is not always practicable either at home or abroad, and as to the latter, which would

India," p. 315) of the Indian physicians of his day that "they apply cauteries most unmercifully in a Mordisheen, called so by the Portugals, being a vomiting with a looseness: the like is done in a calenture." Dr. Granville treated Lord Palmerston ("Autobiography," vol. ii., pp. 262-3) for what he called cholera by placing "a long band of thick flannel, four inches wide, over and along the spine, from the joint in the back of the neck down to the upper portion of the sacrum. . . . Over this band he passed lightly up and down a heated flat iron, such as is used in laundries," and, strange to say, he was not even offered for this "cure," *alias* this piece of "Priggian" titivation, or tomfoolery, the honour of a knighthood.

¹ "Clement VI. was so convinced," says Hecker ("Epidemics of the Middle Ages," p. 29), of the salutary effect of seclusion that, during the plague in Avignon he kept up constant fires and suffered no one to approach him." And another case in point is mentioned in a now very rare book, called "Londiniana, or Reminiscences of the British Metropolis," by Edward Wedlake Brayley, vol. iii., pp. 212-14, which is so curious, not to say so suggestive, that I cannot refuse myself the pleasure of quoting it here. The tradesman here referred to "had a wicket made in his door to take in or send out anything he thought fit. . . . He made it a standing rule that the door should not be opened on any account—fire excepted—and, . . . whenever the wooden window was opened, he caused a flash of gunpowder to be made in the room so as to fill it with smoke." He also "laid in a seasonable quantity of wines, cordial waters, and brandy, and, in fine, nothing was wanting that the situation he was going into could probably require. His letters were brought to the porter who smoked them with sulphur and gunpowder; then opening and sprinkling them with vinegar, they were drawn up by the pulley and then smoked again with perfumes. The master, taking them up with a pair of hair-gloves, the hair innermost, read them with a large reading glass at a considerable distance, and as they were read burnt them." He escaped, and as a thanksgiving offering for the preservation vouchsafed him, he "bestowed upon the poor in his neighbourhood the surplus of his provisions, amounting to 1,500 lb. of bread, five hogsheads of beer, 300 lb. of cheese, five fitches of bacon, and some barrels of salt beef and pork."

appear to have been inaugurated with success by Aurungzebe,¹ there can be no doubt but that Sir Hugh Rose's plan—viz., that of camping out, or rather "dodging cholera," as the soldiers call it, has done more to arrest the progress of this disease and diminish its destructiveness than any other measure we are acquainted withal. Nor is even this without its drawbacks, as so many regiments, or their records, could testify; and I have heard of scenes or sufferings in some of these that would almost tempt one to say that the game was scarcely worth the candle, while not a few have hinted in my hearing that the remedy was, in their cases at least, little if anything better than the disease.

I have already described one visitation of this kind; let me glance at the system from another standpoint, and enumerate some of its drawbacks. If I may judge by my own not very limited experience of these camps I should be disposed to pronounce in their favour; but then that all-pervading element, the weather, happened, though sultry, to be mild and equable on each of the occasions on which I was "out." The absence of rain prevented that saturation or rather soakage of the surface that is so dispiriting, as well as disagreeable; and the early cessation of the disease amongst us rendered frequent change unnecessary.

When the rain pours down, however, as it so often does in torrents at these times, and turns the loamy surface into a sea of mud, things begin to assume a very different complexion. Then the dripping tent and the sodden floor, the difficulty of drying the clothes and the bedding, of cooking food, or even of standing about without inconvenience, irritates the temper and induces a spirit of discontent and despondency. Add to this the querulous wailing and other unpleasantnesses incidental to ailing juvenile or infant life, within the four corners of a reeking tent, and you have before you a picture of wretchedness and discomfort for which it would not be easy to find a parallel elsewhere. 'Tis then that the disease

¹ "Grant Duff's History of the Mahrattas," vol. 1, p. 357. See also in the same direction "Fryer's Account," as above, p. 156; Hazlitt's "History of Venice," vol. 1, p. 245. Mr. (now Sir James) Picton mentions also, if I mistake not, an instance in point in his "Memorials of Liverpool."

finds fitting subjects for its onsets ; 'tis then it carries all before it by assault, and 'tis then, too, that

. Each diligently bends
Towards common thoughts and things for very fear,
Striving their ghastly malady to cheer
By thinking it a thing of yes or no
That housewives talk of.

Woe be to the man or the woman either who happens to be seized under depressing sights or scenes of this description. He or she will almost certainly succumb under such surroundings, and some of these "casualties" are undoubtedly due to that indifference, I might rather say that weariness of life, that associations of this kind are everywhere so apt to engender or provoke.¹

Some one may here interpose and say, "If such are your views of the situation ; if, as you admit, you have nothing tangible to say about it, why write at all on the subject ? Or, if you must needs 'deliver your soul' by writing, why do you do so in this gloomy spirit and despairing strain ?" That, good reader, is just the question I have asked myself a dozen times at least since I began this little essay. And yet methinks that, though I have no brand-new theory about, or even any infallible remedy to suggest for it, I know as much about it as my neighbours—as much, even, perhaps, as some of those "commissioners" who lately went first-class at your and my expense, to Rome, and who came back with their fingers in their mouths and a long-winded report in their pockets, which will either be pigeon-holed in some

¹ Based on various information, public and private ; and the corps chiefly referred to are the 1st Royals, at Nusseerabad ; the 35th, at Agra ; the 36th, in the Peshawur Valley ; the 51st at Meerut ; the 52nd, at Gwalior and Jhansie ; the 58th, at Allahabad ; about which Dr. Ambrose has written so well, and the grave-yards of India tell tales of this kind which it is impossible to ignore. Mr. McCrae assured me that he buried eighteen men of the 36th one evening at Peshawur ; and I copied the following myself off a memorial stone at Meerut, that commemorates the loss by this disease—chiefly, I think, in camp—of the "Buffs :"—"To the memory," etc., "of—officers, 2 ; colour-sergeants, 3 ; sergeants, 3 ; corporals, 6 ; drummers, 14 ; men, 111 ; women, 16 ; children, 43." Nor have these conditions escaped the notice of others. Dr. Munro alludes to them. After mentioning that "within twenty-four hours the command of the Regiment developed upon four different officers," he adds that "here (in camp), too, it was that all, with scarcely an exception, laboured under the influence of choleraic poison, or, at least, sensations not only peculiar, but in many instances distressing," and had rain supervened at this time the situation might have been terribly, perhaps irremediably, complicated and emphasized.

Government office, or published in some dreary blue-book that no one will read.

Is not this, or rather, has not this been the end or outcome of all these costly confabulations; and are we any whit nearer a solution of this mystery—for such it undoubtedly is—now than we were fifty years ago? I say deliberately we are not; and I say further that the time has, in my humble judgment, come for us, individually and collectively, to clear our minds of cant and illusion, and acknowledge the limited range of our faculties. Better this than waste our time in cadging about in this way after a cause that has hitherto evaded, nay, mocked at our search, and that may, for aught we know to the contrary, be either a combination or a compound one. Anyhow, no one condition more than another has yet been proved to be so specifically and unequivocally at the bottom of this mischief as to exclude all others; and this being so, would it not be as well to cry Halt for the present, and “recognise the impossible—the unreasonably difficult?” It may disappear in time like its mediæval congeners, and make no sign. If so we will bid it God-speed, and ask no questions. *Solvitur ambulando* is not, after all, a bad way of settling difficulties of this kind; and if that country is to be congratulated that has no history that art may assuredly rejoice that has witnessed the decay and survived the burial of its worst, or least accessible enemy.

“It is a favourite subject of declamation,” says Dr. McKinnon, “to decry filth and smells as the sources of fever, but there may be fever without filth or smells, as there may be filth and smells without fever;”¹ and if you substitute cholera for fever here these words will apply to the one as much as they do to the other. Speaking for myself, I would say at once that so far as my observation went on the spot filth and smells had little or nothing to do with either the origination or the diffusion of this disease, and that if it kills most people where these do most abound it is because there are more people to kill off there than there are in more

¹ “Annals ut Supra,” No. 5, p. 136; and he might have added, with the character in Beaumont and Fletcher’s *Prophetess*—

. . . . Nor is cleanliness (always)
A saving antidote to keep one from
This deadly poison.

favoured regions.¹ A very similar remark will apply to the agency of water in the causation or prolongation of this disease. I saw no instance of its operation in either of these directions that could stand the test of a rigid scrutiny, and if contaminated water is the cause of it I do not understand how it can be absent at any time from the plains or cantonments of India.²

¹ Depreciating the regret that was expressed by a friend of hers about her returning to town during the prevalence of this disease, Mrs. Sarah Coleridge says ("Memoir and Letters," p. 315) that "I, for my part, believe that the cholera atmosphere is all over England, and that the complaint kills off most people where there are most people to kill, and in the most unfavourable circumstances in regard to diet, clothing, and the air of their dwellings;" and this is, in sum, the view I have been urging all along.

² Dr. Furnell, of the Madras Army, has written a letter and a book since these sheets were placed in this printer's hands, in which he advocates the water-pollution theory of the propagation of this disease. Others uphold similar views, and the instances of the Broad-street pump of 1854, as well as of the East London outbreak of 1866 are familiar to all. These occurrences are said by some "to be decisive in English opinion as to the water question," and its relation to the diffusion of this disease. Be it so, I will not now argue the question, or even go into any detail—controversial or otherwise—on the point. All I here mean to do is to mention a few facts, ask a question or two anent these, and then leave my readers, as is my wont, to draw their own conclusions. There are, according to all accounts, upwards of three hundred millions of souls in Hindustan, and it is well known that water is the only succedaneum for paper, earth, etc., these use "for their occasions." There are no closets—so far as I could see—anywhere outside the Presidency or other large towns, and yet it is notorious that the tanks, the reservoirs, and the kutchas (unbricked) wells that surround the country villages are freely resorted to for natural purposes by the inhabitants. Moreover, several of the rivers of that country, and notably so the Ganges and the Godavery, the Jumna, and the Nerbudda, etc., are sacred, and it is well known that the water of these streams is carried for ceremonial or sacrificial purposes to every Hindu house in Hindustan. Aye, and far beyond it, and yet, good reader, *the country is not depopulated*. Far from it, indeed, the soil is thickly, densely in some quarters, populated, and there are scores, nay, hundreds of your countrymen in that quarter who never see a case of cholera. Does this not strike you as, at least, odd, or does it not occur to you that if polluted water were the cause, the originator and diffuser of the disease, the Punjab and the Deccan would have been long since shorn of their fertility and turned into howling Gobis and Saharas? But then this theory meets, it is said, so many difficulties, it solves so many heretofore insoluble riddles that we ought for this, if for no other or higher reason, to accept and admire it. Be it so, again I say, these gentlemen have just as much right to their opinions as I have to mine, and several of them had far wider fields for cultivating or forming these than I had. All I claim is that I have

Human agency meaning thereby migrations of human beings, or importations of diseased articles of bedding or clothing¹ from "infected" areas, have been so frequently coupled with the introduction of this disease that it would be presumptuous in me to question it. I think, however, that whenever there is a proper disinfecting or cleansing apparatus available, those articles only should be destroyed that have come into direct contact with the body, or that have been saturated with the discharges. Fire is, in either case, the best solvent, and in no disease is cremation more called for than in this. That experienced veteran, Dr. John Murray, described the disease as "spreading (in his day) like a wave over the Punjab and the North-West, generally along the line of commerce;" and Dr. Cayley looks upon the pilgrims as its "chief carriers" in Orissa. This is the prevailing opinion of all those observers of its movements I have conversed with in the East, but it sometimes ignores these media or anticipations, and advances or recedes irrespective of them as best suits its own sweet will or convenience.

There is, in either case, no occasion for a resort to that old fond illusion of our fathers, the "Angel of Death," or the "Wings of the Wind" theory. Neither need we assume that the malady is conveyed by contagion or infection in the ordinary acceptation of these terms, and I saw no instance at all in which a seizure could be justly said to "depend on the agency of touch, or on an atmosphere tainted by emanations from the bodies of the sick."

This is, after all, it may be said, but a very "lame and impotent conclusion." Be it so, I can offer no better. I can neither explain the inexplicable, nor draw "conclusions" from the clouds. All I can say is that I have "sat by the

studied the question to the best of my ability on the spot, and that I came to the conclusion, through that study and that judgment that God gave me, that there is just as much relationship or connection, and no more, between cholera and contaminated water as there is between a hawk and a handsaw, or better, perhaps, between the Goodwin Sands and Tenterden Steeple.

¹ "I have known cholera to be communicated," says Dr. Richardson ("Diseases of Modern Life," p. 458), "by the clothes of the affected person to the women engaged in washing the same;" and there are several allusions to this subject in connection with the outbreak of 1831 in the "Greville Memoirs at Supra," vol. ii., pp. 157, 193, and also 216-17; as well as in the "Sanitary Departmental Reports" *passim*.

cradle" of more than one outbreak of this disease, and "followed its hearse," and that, in my humble opinion, no amount of Macdougall's powder or carbolic acid, no sanitary cordons, land quarantines, lazarettoes,¹ or even cholera commissions will stop the progress—once 'tis on the move—of a disease that has passed as easily over the peaks of the "frosty Caucasus" as it has over those of Devalagiri and Mount Everest, and that slays as vigorously on the frozen shores of Kamskatka and Labrador as it does on the Coromandel coast, or even at the Soonderbunds, near Chittagong.

This being so, it only remains for me to renew my expression of distrust in the use of drugs in the advanced stages of this disorder, and ask the reader who has accompanied me thus far, to look elsewhere for his remedy. This remedy lies, if I have not misinterpreted the records before me, in (1) endeavouring by all the means in your power in preventing the attack; (2) in nursing it well when it comes. The hot bath and recumbency in a warm bed followed by some carminative or astringent draught will conduce towards the attainment of the former object, for in no complaint is the advice, *principiis obsta sero medicina paratur*, so valuable as it is in this, and in no other illness is good nursing so necessary. To this we must look for such "cure" as is attainable in this malady, especially so in its algeide stage.

A distinguished countryman of mine wished that it should be recorded on his tomb that he "fed fevers." If I might presume so far, I would advise you, good reader, to take up a similar view of your responsibilities in this respect, and act on the motto "he nursed cholera." Do not, my

¹ Dr. Cunningham has effectually demolished this figment in his "Twelfth Report" for 1875, p. 48, and, I dare say, subsequently. "The persistence," says Dr. Munro, "with which the disease hung about the regiment, its complete disappearance so often, only to return again with increased violence, even though, to endeavour to avoid it, we vacated building after building in which it appeared," was very depressing; and readers of Kinglake's "Invasion of the Crimea," vol. iii., p. 21, will remember that "the cholera had proved to be a pestilence which was not to be warded off by the stir and glory of battle." He adds in a note that "Captain D'Acres and his captain of the fore-castle alone took out from the tents the corpses of twenty-eight men who had died of this disease during the night," after the battle of the Alma, and any one can surely see from these facts that cholera is a disease, *sui generis*, that recognises no other master but its own sweet will and pleasure, and that will *not* be gainsayed in its course.

friend, allow calomel or other nauseous compound of that description to stick to the tongue or teeth of your helpless patient ; and do not, in obedience to any fantastic theory, allow him or her to be scoured on or off the close-stool into eternity through castor-oil, or other drenching stuff of that kind. For 'tis the purging, like the pace, that kills ; the vomiting is, comparatively speaking, of lesser consequence. Let him or her have your best sympathy, as well as your kindest encouragement, and do not withhold from either in their agony that harmless drink he or she most covets. Remember further, that though the attack may not kill straight off, it paves the way for such a state of debility or reaction as necessarily implies a lingering convalescence, if it does not actually endanger human life. He alone, in my opinion, will best combat this latter condition who knows best how to stay his hands betimes, or who trusts most to the regulated powers of nature.

APPENDIX.

As the papers quoted below confirm in the main the views propounded by me in this essay—while they have come to hand after it was written—and I am anxious that it should be as complete as possible, I will reproduce them in full, and allow them to speak for themselves in connection with it.

I.—Mr. Lawrence (who was at the time here referred to an officer in H.M.'s 51st Regiment) assured me subsequently—and I am transcribing his own words—that the marching out of his corps, on the occasion of its terrible visitation of 1861, rather aggravated than diminished the helplessness and despondency of its members. Many of the men, he assured me, threw down their arms or accoutrements on their slow march from Mean-Mear to Chebale, from sheer inability to carry them, and some of them even lay down by the wayside to die. He assured me that several women and children died of exhaustion in the doolies that carried them, and when rain came on all these sufferings were enhanced, while others were added to them. He added that the cholera first made its appearance among the men of the company that was stationed in the Artillery lines, and that the authorities brought these into the midst of the healthy men, instead of sending them out at once into camp, as they ought to have done. The disease was in this way diffused in the barracks, and he had also an impression that the drinking water was—or rather, might have been—contaminated with feculent matter by percolation from a neighbouring closet. He could find no other or adequate cause for such an explosion as this was.

II.—Answering some questions I put to him on the subject, Dr. J. J. Clarke, of the Bengal Army, wrote to me as follows at Peshawur, in 1868 :—“A severe thunderstorm burst over the encampment of the pilgrims at Hurdwar (three millions in number) on the night of April 11th, 1867, and cholera made its appearance among them on the

following afternoon. Before the 11th the camp was supposed to have been free from the disease. I am induced to think that a cycle of choleraic air struck the pilgrims—not that the seeds of the disease lying dormant in the ground of the encampment were vitalised by the rain. Epidemics in this country go very far to shake one's faith in the contagious nature of the disease; and they would, I believe, even tend to establish the theory of its non-contagiousness. The experiment of 'encamping out' was, so far as this valley (Peshawur) is concerned, rather more of a failure than a success in 1867. I do not despise quarantine, because I believe that great *indirect* good may arise from it. There is not a vestige of evidence, in my opinion, to prove that cholera was imported by the pilgrims into this garrison last year. I have made much inquiry on this point in the city. I have examined police records, and had much conversation with Hukeems (native doctors), and I believe that this garrison was struck by the disease just as the pilgrims themselves were struck at Hurdwar. The disease did not *creep* into the valley; it struck the Europeans in cantonments first, and the blow came down like a sledge-hammer, suddenly and fiercely, upon the Artillery and the 42nd Highlanders the same day."

III.—The following remarks were embodied by myself in one of the statements I had to prepare for the authorities of my department, but it was withheld at the last moment to save an interminable correspondence on the point, and also because it might possibly be regarded as in some measure a censure upon the organisers of this system:—"This would perhaps be the proper place to allude to that plan of camping out during epidemics of cholera which was recently introduced by Sir Hugh Rose, and which has been so much acted on of late years in this country. I intended discussing the subject in some detail, but that this paper is long enough already, and that, moreover, a late judicious general order has so modified the situation as to deprive it of much of the worry and unpleasantness that formerly attached to it. The obligations of frequent, if not, indeed, daily change which the first order seemed to imply rather than enforce has been dispensed with, and the discretion of the commanding and medical officer has been relied on instead. The principle was good, but as in all similar instances of supposed panaceas, the details of it were worked to death, and the families were so harassed in many instances that they hated the very name of the thing. No wonder, for they sometimes lost all their bedding or other belongings, and endured such other inconveniences as can only be realised by him who has witnessed them on the spot. Among these must be included the loss of several children by meningitis or marasmus, and I believe myself that sunstroke and dysentery have numbered more victims under this system than they have ever done in this country before."

IV.—As the question of inoculation for cholera may again crop up at any moment, while the following letter alludes also to a danger from cholera—viz., live burial, that has not been sufficiently dwelt upon, in my opinion, by systematic writers, I subjoin it, and leave it to speak for itself:—

INOCULATION FOR CHOLERA.

To the Editor of the St. James's Gazette.

SIR,—With reference to Dr. Murray's letter on this subject in your issue of the 15th inst., allow me to say, as the result of my own personal experience on the spot, that one attack of cholera forms no protection

against a second seizure or recurrence *de novo* of this disease in the same subject. Proofs in point may be easily procured. More than one case of the kind occurred within the sphere of my own cognizance, and one of these especially made such an impression on me as I am not likely to forget. The man in question belonged to the elephant battery, a portion of which is fixed at Peshawur, and he acted as my own orderly during the time that I was attached to the hospital of that corps (the Royal Artillery) at that station. He assured me several times, and others confirmed this statement—it was, indeed, generally known there—that he had been sent on a previous occasion, and as the result of a seizure like that of which he subsequently died under my care, to the local dead-house, to await, along with other corpses, his turn for interment. When the attendants came to remove the bodies on the following morning, they fancied they noticed, as they were lifting him into his coffin, some signs of life in him. They sent for the apothecary of the day, accordingly; and this officer, having employed the necessary measures (including friction and brandy), had the satisfaction of so far restoring him as to be able to order his return to bed. He died, as I have just hinted, of a second attack under my care; and you are, of course, aware that *post-mortem* muscular contractions—some of which closely simulate life—are commoner after death in this disease than, if I except yellow fever and one or two others, they are in any other that science is acquainted with.—I am, Sir, your obedient servant,

August 16th, 1885 (?)

W. C.

P.S.—I may add that, as the result of this and other similar experience of this disease in its home, I am entirely opposed to inoculation as a prophylactic or otherwise against cholera. The process is, in my humble opinion, useless, dangerous, and deserving of nothing but reprobation and censure.

V.—Dr. Pringle's valuable experience of this disease has been laid before the profession since this paper was written, and I was more than gratified at finding, on perusing his paper, how entirely we agreed as to its leading features or peculiarities. I can testify, from personal enquiry and observation on the spot, that cholera has never appeared at Mussorie or in the neighbouring hills except when it was imported into them from the plains, and his views as to the dispersion or diffusion of cholera by the pilgrims from Hurdwar in 1867 and 1879 accord with those generally entertained on the point in India. His emphatic condemnation of sanitary cordons and land-quarantine is worthy of all acceptance. So is his belief that cholera "is most certainly neither contagious nor infectious in the strict sense of these terms;" and as to his remark that "nursing is the sheet-anchor in cholera, and should be persevered with . . . till death has undoubtedly claimed its victim"—have I not said the same thing over and over again, or acted on the principle involved in it, throughout my whole career? His story of the soldier who "had been put with a pickaxe and a spade into a stretcher, to be buried at the next halting ground," but who was found sitting up when his comrades came up for this purpose; as well as that of the Bengal civilian—still alive—who "heard the order given for his coffin," supports my experience as above, and I quite think with him that "dead-houses (in and out of India) could tell (even) sadder tales" than these. But I cannot, for obvious reasons, continue this criticism. I will conclude, accordingly, by observing that he too insists, like myself

and others, upon the occurrence of certain atmospheric conditions as "among the conditions necessary for the development" of a seizure or outbreak of this kind; and he assumes also, like myself and many other observers of the vagaries of this malady, that where these conditions are present "every effort may, and in many cases will, fail to keep out the disease."

VI.—The following remarks, which relate to the manner in which this disease is conveyed or propagated in the "Hills," are from the pen of that experienced traveller and pioneer, the late Frederick Wilson, *alias* "Shikari" Wilson, *alias* "Mountaineer," whose "strange eventful history" and painful death I have glanced at in the *Lancet* of April 24th, 1886, p. 808. They will explain themselves:—"In the spring of 1875 I was (says my friend) in the Deyrah Dhoon, and had a lot of hill men with me. One came from his house in the interior (in April, I think) to see his two brothers, who were in my service as chuprassie and bearer (messenger and valet). He remained with our camp about a week, and then accompanied us to Mussoorie. A few cases of cholera had occurred at Deyrah and Rajpore, and two days after reaching Mussoorie this man was attacked and died in the local Dispensary Hospital five days after admission. One of his brothers had nursed him while under treatment, and after the man's death he and the other brother went to their home in the hills, which they reached in four days. Three days afterwards the younger brother, who had been the nurse, was attacked with illness, and died six days after. The family was a numerous one, consisting of some fifteen members, and two more of them were attacked and died, but no others in the village. In the meantime cholera had been severe in Deyrah and Rajpore, particularly so in the latter place, and many deaths had been the result.

"As usual at this time of the year, when people are going uphill daily for the season, a great number of Puhāries (hillmen) had congregated at Rajpore as porters, and when deaths became frequent, most of them left, and went to their homes in the interior. Many of these men were attacked with cholera on the road. My son, who left Mussoorie for Gangoutree at the same time, saw five corpses on the pathway's side during his three first marches. One of his men was attacked, and cured with camphoriva. Others of those who came from Rajpore were attacked after reaching home, and a few of the inhabitants of the valleys in which they resided were also seized; but the disease did not spread to the other villages in the neighbourhood, and this, too, though these latter were not only very dirty, but they were also hot and sultry. We may conclude, therefore," he continues, "that there is something in the surroundings of this part of the Himalayas that is highly antagonistic to the spread of cholera;" and we may also, I think, admit so far, but no farther, that this disease is at times, and under favouring circumstances, thus conveyed by human agency. How that "conveyance" is effected—whether through the clothes, the breath, the skin, or the excreta—I do not know, neither does anyone else, and having thus exhausted my own stock of personal views or reminiscences of this subject and situation, I withdraw from both, and leave my readers to draw from these such inferences or conclusions as appear best to themselves. *Val.*

